

Saildrone

Saildrone: Unmanned Surface Vessel (USV)

Alameda, CA

Scientists and researchers have traditionally relied upon large research vessels for oceanographic data collection and monitoring activities. The data these vessels provide improves the scientific understanding of physical and biological aspects of the ocean. It also contributes to scientific disciplines whose work intersects with ocean processes, such as meteorology and climatology. The data has an array of practical applications, such as improving weather forecasts and aiding in species management.

However, these vessels can be costly and have other drawbacks as well. For example, they require time for scheduling and planning voyages, and can cause research restrictions due to their size and maneuverability. Despite these drawbacks, the information these vessels provide is imperative, so the search for a better method ensued.

The California-based company, Saildrone, sought collaboration with NOAA's Pacific Marine Environmental Laboratory (PMEL) to maximize the scientific applications of the wind- powered, unmanned surface vessel (USV) they developed.

Web

http://www.saildrone.com

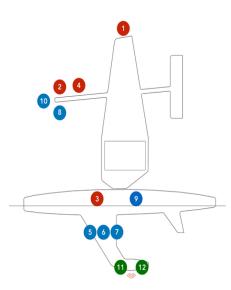


Photo: Saildrone (Side View)

PROJECT

PMEL foresaw the potential for their (USV) technology to expand NOAA's ocean observing research capabilities. After Saildrone produced a prototype of an autonomous sailing vehicle the seeds of a collaborative relationship were planted. The goal of the collaborative research agreement (CRADA) was to combine NOAA PMEL's experience implementing large-scale observing networks with an enhanced version of a Saildrone able to attain high-quality scientific observations that would be accepted by the global scientific community. The ongoing CRADA is a collaborative process between PMEL and Saildrone resulting in multiple waves of technology/product development focusing on NOAA's data collection or monitoring **PERSEATS**. These waves include:

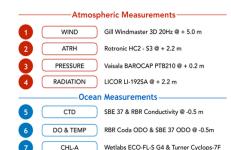
The data collected by Saildrones generates a variety of ecosystem service benefits.

For example, the data can be used to enhance NOAA fisheries' capabilities, allowing heter A meteorological and oceanographic sensor package, where the focus was on better management of isheries for species health, preservation, or public the development of sensors to capture a range of ocean (e.g., ocean currents, consumption. The data improves geospatial coverage of carbon in the ocean which can be used to inform processes like ocean acidification and its impacts on plants and Active acoustics to monitor marine mammals. Also, Saildrones can augment the ability to detect oil spills; helping spur spill response carbon field the spills impacts of organisms and ecosystems. (CO₂) sensor.

The development between and home has recited an applicable who mic impacts for the company and the State of California that filter out to the country. Internally, the wind that place sind one of the california that filter out to the country. Internally, the wind that place sind development of the capital of the capital

NOAA SUPPORT

Saildrone credits the CRADA knowledge-sharing process with accelerating company research and development. The collaboration with NOAA has also added a layer of product legitimacy for investors, given the agency's reputation for conducting rigorous science.



Heitronics CT15.2 @ +2.2 m

SKIN SST